

WHAT IS CLAIMED IS:

1. A method for determining a data rate for a packet data service in a mobile station for a mobile communication system including a base station, the mobile station being provided with a voice service and a packet data service from the base station, comprising the steps of:

receiving orthogonal code allocation information indicating a number of orthogonal codes allocated for the packet data service;

measuring a carrier-to-interference ratio (CIR) using a received pilot channel;

determining a data rate corresponding to the measured CIR; and

controlling the determined data rate based on the number of the allocated orthogonal codes and thus determining a controlled data rate.

2. The method as claimed in claim 1, wherein the determined data rate is decreased when the number of the allocated orthogonal codes is less than the number of all orthogonal codes.

3. The method as claimed in claim 2, further comprising the step of calculating a sequence repetition number determined by a ratio of the number of data modulation symbols per packet to the number of available data modulation symbols based on the number of the allocated orthogonal codes, wherein the determined data rate is controlled according to the calculated sequence repetition number.

4. The method as claimed in claim 3, wherein the determined data rate is decreased by determining to increase the number of slots for transmitting one packet according to the calculated sequence repetition number.

5. The method as claimed in claim 4, wherein the determined data rate is decreased when the calculated sequence repetition number is less than a predetermined value.

6. The method as claimed in claim 3, wherein the determined data rate is decreased by determining to decrease the number of symbols in a transmission packet according to the calculated sequence repetition number.

7. The method as claimed in claim 6, wherein the determined data

rate is decreased when the calculated sequence repetition number is less than a predetermined value.

8. The method as claimed in claim 1, wherein the orthogonal code allocation information is received from the base station in a predetermined time unit.

9. The method as claimed in claim 8, wherein the predetermined time unit is a frame unit.

10. The method as claimed in claim 1, further comprising the step of transmitting information on the controlled data rate to the base station.

11. The method as claimed in claim 1, further comprising the step of setting demodulation parameters according to the controlled data rate.

12. The method as claimed in claim 11, wherein the demodulation parameters include (i) a sequence repetition number determined by a ratio of the number of data modulation symbols per packet to the number of available data modulation symbol, (ii) the number of slots for transmitting one packet, and (iii) the number of symbols in a transmission packet.

13. A method for selecting a base station for a packet data service from a plurality of base stations by a mobile station in a mobile communication system including a plurality of the base stations, the mobile station being provided with a voice service and a packet data service from the base stations, comprising the steps of:

measuring CIRs using pilot channels received from the respective base stations;

determining data rates corresponding to the measured CIRs of the respective base stations; and

determining a base station having the highest data rate among the data rates of the respective mobile stations as a base station to which a data rate request is to be transmitted, and transmitting a signal for selecting the determined base station.

14. A method for determining a data rate for a packet data service in a mobile station for a mobile communication system including a plurality of base

stations, the mobile station being provided with a voice service and a packet data service from the base stations, comprising the steps of:

receiving orthogonal code allocation information indicating the number of orthogonal codes allocated for the packet data service from the respective base stations;

measuring CIRs using pilot channels received from the respective base stations;

determining data rates corresponding to the measured CIRs of the respective base stations;

selecting a base station having the highest data rate among the data rates of the respective base stations;

controlling the determined data rate of the selected base station based on the number of the allocated orthogonal codes and determining a controlled data rate; and

transmitting information on the controlled data rate to the selected base station.

15. The method as claimed in claim 14, wherein the determined data rate is decreased when the number of the allocated orthogonal codes is less than the number of orthogonal codes corresponding to the determined data rate.

16. The method as claimed in claim 15, further comprising the step of calculating a sequence repetition number determined by a ratio of the number of data modulation symbols per packet to the number of available data modulation symbols based on the number of the allocated orthogonal codes, wherein the determined data rate is controlled according to the calculated sequence repetition number.

17. The method as claimed in claim 16, wherein the determined data rate is decreased by determining to increase the number of slots for transmitting one packet according to the calculated sequence repetition number.

18. The method as claimed in claim 17, wherein the determined data rate is decreased when the calculated sequence repetition number is less than a predetermined value.

19. The method as claimed in claim 16, wherein the determined data rate is decreased by determining to decrease the number of symbols in a

transmission packet according to the calculated sequence repetition number.

20. The method as claimed in claim 19, wherein the determined data rate is decreased when the calculated sequence repetition number is less than a predetermined value.

21. The method as claimed in claim 14, wherein the orthogonal code allocation information is received from the base stations in a predetermined time unit.

22. The method as claimed in claim 21, wherein the predetermined time unit is a frame unit.

23. The method as claimed in claim 14, further comprising the step of setting demodulation parameters according to the controlled data rate.

24. The method as claimed in claim 23, wherein the demodulation parameters include (i) a sequence repetition number determined by a ratio of the number of data modulation symbols per packet to the number of available data modulation symbol, (ii) the number of slots for transmitting one packet, and (iii) the number of symbols in a transmission packet.

25. A method for determining a data rate for a packet data service in a mobile communication system including a base station and a mobile station being provided with a voice service and a packet data service from the base station, comprising the steps of:

measuring a CIR using a received pilot channel by the mobile station;

determining by the mobile station a data rate corresponding to a data rate corresponding to the measured CIR, and transmitting information on the determined data rate to the base station; and

upon receiving the information on the determined data rate, controlling by the base station the determined data rate based on the number of orthogonal codes allocated for the packet data service, and determining a controlled data rate.

26. The method as claimed in claim 25, wherein the determined data rate is decreased when the number of the allocated orthogonal codes is less than the number of orthogonal codes corresponding to the determined data rate.

5 27. The method as claimed in claim 26, further comprising the step of calculating a sequence repetition number determined by a ratio of the number of data modulation symbols per packet to the number of available data modulation symbols based on the number of the allocated orthogonal codes, wherein the determined data rate is controlled according to the calculated sequence repetition number.

10 28. The method as claimed in claim 27, wherein the determined data rate is decreased by determining to increase the number of slots for transmitting one packet according to the calculated sequence repetition number.

15 29. The method as claimed in claim 28, wherein the determined data rate is decreased when the calculated sequence repetition number is less than a predetermined value.

20 30. The method as claimed in claim 27, wherein the determined data rate is decreased by determining to decrease the number of symbols in a transmission packet according to the calculated sequence repetition number.

25 31. The method as claimed in claim 30, wherein the determined data rate is decreased when the calculated sequence repetition number is less than a predetermined value.

 32. The method as claimed in claim 25, further comprising the step of setting modulation parameters according to the controlled data rate.

30 33. The method as claimed in claim 32, wherein the modulation parameters include (i) a sequence repetition number determined by a ratio of the number of data modulation symbols per packet to the number of available data modulation symbol, (ii) the number of slots for transmitting one packet, and (iii) the number of symbols in a transmission packet.

35 34. A mobile station for determining a data rate for a packet data service in a mobile communication system including a base station, the mobile station being provided with a voice service and a packet data service from the base station, comprising:

 a receiver for receiving orthogonal code allocation information indicating

the number of orthogonal codes allocated for the packet data service;
 a measurer for measuring a CIR using a received pilot channel; and
 a controller for determining a data rate corresponding to the measured
 CIR, controlling the determined data rate based on the number of the allocated
 orthogonal codes, and determining a controlled data rate.

35. The mobile station as claimed in claim 34, wherein the controller
 decreases the determined data rate when the number of the allocated orthogonal
 codes is less than the number of orthogonal codes corresponding to the
 determined data rate.

36. The mobile station as claimed in claim 35, wherein the controller
 calculates a sequence repetition number determined by a ratio of the number of
 data modulation symbols per packet to the number of available data modulation
 symbols based on the number of the allocated orthogonal codes, and controls the
 determined data rate according to the calculated sequence repetition number.

37. The mobile station as claimed in claim 36, wherein the controller
 decreases the determined data rate by determining to increase the number of slots
 for transmitting one packet according to the calculated sequence repetition
 number.

38. The mobile station as claimed in claim 37, wherein the controller
 decreases the determined data rate when the calculated sequence repetition
 number is less than a predetermined value.

39. The mobile station as claimed in claim 36, wherein the controller
 decreases the determined data rate by determining to decrease the number of
 symbols in a transmission packet according to the calculated sequence repetition
 number.

40. The mobile station as claimed in claim 39, wherein the controller
 decreases the determined data rate when the calculated sequence repetition
 number is less than a predetermined value.

41. The mobile station as claimed in claim 34, wherein the
 orthogonal code allocation information is received from the base station in a
 predetermined time unit.

42. The mobile station as claimed in claim 41, wherein the predetermined time unit is a frame unit.

5 43. The mobile station as claimed in claim 34, further comprising a transmitter for transmitting information on the controlled data rate to the base station.

10 44. A mobile station for selecting a base station for a packet data service from a plurality of base stations in a mobile communication system, the mobile station being provided with a voice service and a packet data service from the base stations, comprising:

 a measurer for measuring CIRs using pilot channels received from the respective base stations;

15 a controller for determining data rates corresponding to the measured CIRs of the respective base stations, and determining a base station having the highest data rate among the data rates of the respective base stations as a base station to which a data rate request is to be transmitted; and

20 a transmitter for transmitting a signal for selecting the determined base station.

25 45. The mobile station as claimed in claim 44, further comprising a memory for storing a plurality of data rates associated with a plurality of CIRs, wherein the controller selects the data rate corresponding to the measured CIR from the memory.

30 46. An apparatus for determining a data rate for a packet data service in a mobile communication system including a base station and a mobile station being provided with a voice service and a packet data service from the base station, comprising:

 the mobile station for measuring a CIR using a received pilot channel, determining a data rate corresponding to the measured CIR, and transmitting information on the determined data rate to the base station; and

35 the base station for receiving the information on the determined data rate, controlling the determined data rate based on the number of orthogonal codes allocated for the packet data service, and determining a controlled data rate.

47. The apparatus as claimed in claim 46, wherein the base station

decreases the determined data rate when the number of the allocated orthogonal codes is less than the number of orthogonal codes corresponding to the determined data rate.

5 48. The apparatus as claimed in claim 47, wherein the base station
calculates a sequence repetition number determined by a ratio of the number of
data modulation symbols per packet to the number of available data modulation
symbols based on the number of the allocated orthogonal codes, and controls the
determined data rate according to the calculated sequence repetition number.

10 49. The apparatus as claimed in claim 48, wherein the base station
decreases the determined data rate by determining to increase the number of slots
for transmitting one packet according to the calculated sequence repetition
number.

15 50. The apparatus as claimed in claim 49, wherein the base station
decreases the determined data rate when the calculated sequence repetition
number is less than a predetermined value.

20 51. The apparatus as claimed in claim 48, wherein the base station
decreases the determined data rate by determining to decrease the number of
symbols in a transmission packet according to the calculated sequence repetition
number.

25 52. The apparatus as claimed in claim 51, wherein the base station
decreases the determined data rate when the calculated sequence repetition
number is less than a predetermined value.